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09/750,537	12/28/2000	Junichi Matsuda	P/2850-43	6950

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EXAMINER	
CASIANO, ANGEL L	
ART UNIT	**PAPER NUMBER**
2182	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/750,537	MATSUDA, JUNICHI	
	Examiner	Art Unit	
	Angel L Casiano	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24 and 26-82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24 and 26-82* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/30/03 12/28/00*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

1. The present Office action is in response to Amendment dated 20 September 2004.

2. Claims 1-24, 26-82 are pending.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on October 30, 2003 and December 28, 2000 were filed after the mailing date of the application on December 28, 2000. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

4. Previous Objections to the Drawings have been overcome with the corrections presented in the Amendment.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

6. Previous Objections to the claims have been overcome with the corrections filed in the present Amendment.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-2, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 27, 29, 31, 33, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioli et al. [US 6,510,151 B1] in view of Fukunaga et al. [US 2002/0001288 A1].

Regarding claim 1, Cioli et al. teaches a bridge for interconnecting together buses, each of which interconnects nodes in a data network (see Figures 1A-C). The reference (see Figure 2) includes storage means for storing a number or receiving nodes with respect to *each* of connections being established (see column 2, lines 46-47; column 7, lines 35-42). However, Cioli et al. does not teach the means for executing the steps of "detecting", "re-securing" or "transmitting". Regarding this aspect of the claim, Fukunaga et al. teaches these steps. Fukunaga et al. teaches detecting the occurrence of a bus reset (see Page 2, [0018] and re-securing the resources. In addition, the secondary reference teaches a bridge (see Abstract) where two nodes remain connected (see Page 6, [0146-0149]) regardless of the occurrence of a bus reset. At the time of the invention, one of ordinary skill in the art would have been motivated to combine the disclosures in order to obtain a communication network system capable of performing normal

data communication between communication control networks while maintaining the consistency of network configuration update request processing, as taught by Fukunaga et al. (see Page 2, [0017]).

As for claim 2, Fukunaga et al. teaches a plurality of buses (see Page 2, [0017]) as based on an IEEE 1394 standard and communication based on this standard. One of ordinary skill in the art would have been motivated to combine the cited disclosures for the reasons stated in claim 1.

Regarding claim 5, Cioli et al. teaches a communication path control method (see Abstract), including a bridge for interconnecting together buses, each of which interconnects nodes in a data network (see Figures 1A-C). The reference (see Figure 2) includes storage means for storing a number or receiving nodes with respect to *each* of connections being established (see column 2, lines 46-47; column 7, lines 35-42). In addition, the reference teaches establishing or disconnecting communication paths (see "connection"; column 5, line 39; column 7, lines 5-7; column 9, lines 62-67) by increasing or decreasing the number stored in the storage means.). However, Cioli et al. does not teach the steps of "detecting", "re-securing" or "transmitting". Regarding this aspect of the claim, Fukunaga et al. teaches these steps. Fukunaga et al. teaches detecting the occurrence of a bus reset (see Page 2, [0018] and re-securing the resources. In addition, the secondary reference teaches a bridge (see Abstract) where two nodes remain connected (see Page 6, [0146-0149]) regardless of the occurrence of a bus reset. At the time of the invention, one of ordinary skill in the art would have been motivated to combine the disclosures in order to obtain a communication network system capable of performing normal

data communication between communication control networks while maintaining the consistency of network configuration update request processing, as taught by Fukunaga et al. (see Page 2, [0017]).

As for claims 7 and 9, Cioli et al. teaches a method having a bridge, for receiving stream packets (see Title, Abstract) from a bus. The reference also includes a number of counters (see Figure 7). A connection counter is disclosed (see column 9, line 65), where if a number is "0" (less than one), the connection is unprogrammed (and packets are not received, as claimed).

As per claim 11, Cioli et al. explicitly teaches searching the portals of the bridge and *incrementing* the counter by "1" to establish a communication path (see column 9, lines 54-59).

As per claim 13, Cioli et al. teaches decrementing (decreasing) the counter by "1" to release the communication path.

As per claim 15, the counter in the cited reference is changed by "1" (see column 9, line 59; Figure 6) after completion of a search of the bridge in the communication path.

As per claim 17, the process of changing the counter by "1" is repeated from one end to the other in a communication path (see column 9, lines 41-61).

As for claim 19, Cioli et al. explicitly teaches a communication path control method where a control means searches depending on the communication path and *changes a counter* in value under a request (see "switch", column 5, lines 41-45).

As for claim 21, Cioli et al. explicitly teaches storing identifiers (see column 7, lines 26-33 and 40) as part of the communication path control method. The connections are established or released based on the identifiers.

As per claim 23, Fukunaga et al. teaches a plurality of buses (see Page 2, [0017]) as based on an IEEE 1394 standard and communication based on this standard. One of ordinary skill in the art would have been motivated to combine the cited disclosures for the reasons stated in claim 1.

As per claims 27 and 29, Cioli et al. does not explicitly teach detection as to whether resource re-securement fails and disconnection of the communication path if re-securement fails. Regarding this limitation, Fukunaga et al. teaches a "bus reset", where the occurrence of the reset is *detected* (see Abstract). The nodes in the cited reference remain connected regardless of the bus reset (see Page 6, [0146-0149]) and connections are re-secured after the reset. However, this reference does not cite "disconnection" of the communication path in case re-securement fails. Cioli et al. explicitly teaches disconnection (see column 9, line 62) and removal of a communication path. Therefore, the combination of references teaches the limitations in terms of re-securement after bus reset and disconnection of a communication path. As stated above,

one of ordinary skill in the art would have been motivated to combine the cited disclosures for the reasons stated in claim 1

As for claim 31, Cioli et al. does not teach a method including the step of "requesting at least one node connected on the specific bus to make a communication upon detection of the bus reset", as claimed. Fukunaga et al. teaches a communication made *upon detection of the bus reset* (Page 6). Cioli et al. does not cite "disconnection" of the communication path. Cioli et al. explicitly teaches disconnection (see column 9, line 62) and removal of a communication path.

As per claim 33, Cioli et al. does not teach a "bus reset" or detection as to whether the transmitting node and receiving node do not remain connected. Fukunaga et al. teaches the occurrence of a bus reset on a specific bus, which is part of a communication path established in advance (Abstract). Fukunaga et al. also teaches a "bus reset", where the occurrence of the reset is *detected* (see Page 6, [0149]). The reset is disclosed to include the insertion or removal (disconnection) of a node. Fukunaga et al. teaches that the nodes remain connected regardless of the bus reset (see Page 6, [0146-0149]) and connections are re-secured after the reset. However, Fukunaga et al. does not cite "disconnection" of the communication path. Cioli et al. explicitly teaches disconnection (see column 9, line 62) and removal of a communication path. Therefore, the combination of references teaches the limitations in terms of detection and re-securement after bus reset and disconnection of a communication path.

As for claim 35, Fukunaga et al. teaches a plurality of buses (see Page 2, [0017]) as based on an IEEE 1394 standard and communication based on this standard. One of ordinary skill in the art would have been motivated to combine the cited disclosures for the reasons stated in claim 1.

9. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato [IDS] in view of Fukunaga [US 2002/0001288 A1].

Regarding claim 3, the cited reference teaches a device controller for controlling communication in a data network (see Abstract; Page 2, lines 15-24; Figures 1-6). In addition, the reference teaches storage for a number of receiving nodes with respect to *each of the connections being established* between nodes interconnected together (see Figures 13 and 14, "node-ID"; Page 12, lines 18-21; Page 13, lines 10-11). Nonetheless, Kato fails to teach the means for executing the steps of "detecting", "re-securing" or "transmitting". Regarding this aspect of the claim, Fukunaga et al. teaches these steps. Fukunaga et al. teaches detecting the occurrence of a bus reset (see Page 2, [0018] and re-securing the resources. In addition, the secondary reference teaches a bridge (see Abstract) where two nodes remain connected (see Page 6, [0146-0149]) regardless of the occurrence of a bus reset. At the time of the invention, one of ordinary skill in the art would have been motivated to combine the disclosures in order to obtain a communication network system capable of performing normal data communication between communication control networks while maintaining the consistency of network configuration update request processing, as taught by Fukunaga et al. (see Page 2, [0017]).

As for claim 4, Kato teaches buses based on the IEEE 1394 standard (see Figure 4; Page 5, lines 10-14; Page 7, lines 19-24; Page 8, line 14).

10. Claims 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioli et al. [US 6,510,151 B1] in view of Fukunaga [US 2002/0001288 A1] in further view of Kato [IDS].

Regarding claims 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, and 36, these correspond to the communication path control method disclosed in claims 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 27, 29, 31, 33, and 35. The present claims differ from the mentioned group since these recite "one bridge *under control of at least one device controller* installing a storage means". As stated in claims 3-4, Kato teaches all the limitations corresponding to the device controller installing a storage means. Therefore, the present claims are rejected under the same rationale (see rejections for claims under Cioli et al. in view of Fukunaga et al.).

11. Claims 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioli et al. [US 6,510,151 B1] in view of Kato [IDS] in further view of applicant's admission of prior art [AAPA].

Regarding claim 37, Cioli et al. teaches a bridge having portals for interconnecting together buses, each of which interconnects nodes in a data network (see Figures 1A-C). The reference (see Figure 2) includes storage means for storing a connection counter (see "number") or

receiving nodes with respect to *each* of connections being established (see column 2, lines 46-47; column 7, lines 35-42). Cioli et al. explicitly teaches searching the portals of the bridge and *incrementing* the counter by "1" to establish a communication path (see column 9, lines 54-59) as well as decrementing (decreasing) the counter by "1" to release the communication path. However, the cited reference does not teach a device controller, as claimed. Kato teaches a device controller for controlling communication in a data network (see Abstract; Page 2, lines 15-24; Figures 1-6). In addition, the reference teaches storage for a number of receiving nodes with respect to *each of the connections being established* between nodes interconnected together (see Figures 13 and 14, "node-ID"; Page 12, lines 18-21; Page 13, lines 10-11). At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to enable an information processing apparatus coupled to a network having a plurality of information processing apparatuses coupled to be operated in order to perform I/O connection setting (see Kato). The combination of references does not explicitly include "a plurality of buses each of which installs at least one node as an isochronous resource manager (IRM) based on an IEEE 1394 standard", as claimed. Nonetheless, the combination of prior art does teach communication according to the IEEE 1394 standard (see Kato). AAPA teaches that an isochronous resource manager (IRM), which is connected with a bus, based on the IEEE 1394 standard (see page 67, lines 1-3). The present description is cited as "conventional procedures for establishment of a point-to-point connection between audio/visual devices" (see Figure 26; Page 6, lines 24-25 of applicant's Specification). Therefore, since the cited IRM is part of a "conventional" configuration under IEEE 1394, it would have been obvious to one of ordinary

skill in the art to incorporate this into the system resulting from the combination of references, since this system teaches communication among audio/visual devices according to IEEE 1394.

As for claims 38-42, these are directed to implement the communication path control system for the communication control method disclosed in previous claims. The cited method claims are rejected in the present Office action. Therefore, the present system claims are rejected under the same rationale.

12. Regarding dependent claims 43-82, these constitute the same limitations as previously rejected claims (see rejections for claims 11, 13, 15, 17, 19, 21, 23 and 35). The prior art cited in the Office action teaches or suggests all the limitations corresponding to these dependent claims and their corresponding parent claims. Therefore, claims 43-82 are rejected under the same rationale.

Response to Arguments

13. Applicant's arguments see Amendment, filed 20 September 2004, with respect to the rejection(s)of claim(s) 1-24, 26-36, 43-82 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Fukunaga et al. [US 2002/0001288 A1].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel L Casiano whose telephone number is 571-272-4142. The examiner can normally be reached on 9:00-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Alc
06 January 2005